Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

Claim 1 (currently amended): A pharmaceutical composition for application at a biodegradable plate-containing site requiring new bone[,] or cartilage [or connective tissue] formation in a subject, comprising a plurality of bone marrow stromal cells (MSCs) and a pharmaceutically acceptable polymer,

wherein the MSCs are isolated from the subject; are transduced *in vitro* after isolation from the subject with [wherein the MSCs comprise] a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter, and are applied at the biodegradable plate-containing site [and a pharmaceutically acceptable polymer].

Claim 2 (original): The composition as recited in Claim 1 wherein the polymer is selected from a group consisting of alginate and collagen.

Claim 3 (original): The composition as recited in Claim 1 wherein the MSCs are present in a concentration of about 50×10^6 per ml of the polymer.

Claim 4 (previously presented): The composition as recited in Claim 1 wherein the polymer is collagen type I.

Claim 5 (currently amended): A method of enhancing new bone[,] or cartilage [or connective tissue] formation in a subject, comprising:

a. obtaining a plurality of bone marrow stromal cells (MSCs) from [a] the subject;

b. transducing the MSCs of step a) with a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter to generate BMP-2 protein producing MSCs;

c. applying a biodegradable plate to a site requiring new bone[,] or cartilage [or connective tissue] formation on the subject; and

d. applying a composition comprising the BMP-2 protein producing MSCs and a pharmaceutically acceptable polymer to the site,

such that new bone[,] or cartilage [or connective tissue] formation is enhanced.

Claim 6 (currently amended): The method as recited in Claim 5 wherein the [DNA sequence encoding BMP-2 is transferred via] replication-deficient viral vector is an adenovirus.

Claim 7 (cancelled)

Claim 8 (previously presented): The method as recited in Claim 5 wherein the protein producing MSCs are topically applied in a concentration of about 50 x 10^6 per ml of a pharmaceutically acceptable polymer and produce an effective amount of the protein.

Claims 9 (cancelled)

Claim 10 (cancelled)

Claim 11 (previously presented): The composition of claim 1 wherein the composition is a gel.

Claim 12 (previously presented): The method of claim 5 wherein the composition is a gel.

Claim 13 (previously presented): The composition of claim 1 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).

Claim 14 (previously presented): The method of claim 5 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).